CLAIMS

1. An internal treatment apparatus for a patient having a flexible tubular body to be introduced into a patient, said flexible tubular body comprising:

a center opening for inserting therethrough an endoscope for observing a target site, said center opening being circular in cross section and disposed at a center of an end face of said flexible tubular body; and

a plurality of circumferential apertures through which surgical instruments are inserted for performing a surgical procedure on said target site, said plurality of circumferential apertures being provided in said flexible tubular body at equi-angular intervals around said center opening.

2. An internal treatment system for a patient comprising:

a flexible tubular body, to be introduced into a patient, said flexible tubular body including a center opening for inserting therethrough an endoscope for observing a target site, said center opening being circular in cross section and disposed at a center of an end face of said flexible tubular body, and a plurality of circumferential apertures through which surgical instruments are inserted for performing a surgical procedure on said target site, said plurality of

circumferential apertures being provided in said flexible tubular body at equi-angular intervals around said center opening;

a body manipulating device for manipulating said flexible tubular body from outside said patient;

an endoscope manipulating device for manipulating said endoscope from outside said patient; and

a surgical instrument manipulating device for manipulating said surgical instruments from outside said patient.

3. An internal treatment apparatus for a patient comprising a flexible tubular body to be introduced into a patient, said flexible tubular body comprising:

a center opening for inserting therethrough an endoscope for observing a target site, said center opening extending through said flexible tubular body from a center of a distal end face of said flexible tubular body, said distal end face facing said target site, and

a plurality of circumferential apertures through which surgical instruments are inserted for performing a surgical procedure on said target site, said plurality of circumferential apertures being provided to extend through said flexible tubular body from a side face of said flexible tubular body.

4. An internal treatment system for a patient

comprising:

a flexible tubular body to be introduced into a patient, said flexible tubular body including a center opening for inserting therethrough an endoscope for observing a target site, said center opening being circular in cross section and extending through said flexible tubular body from a center of a distal end face of said flexible tubular body, said distal end face facing said target site, and a plurality of circumferential apertures through which surgical instruments are inserted for performing a surgical procedure on said target site, said plurality of circumferential apertures being provided to extend through said flexible tubular body from a side face of said flexible tubular body;

a body manipulating device for manipulating said flexible tubular body from outside said patient;

an endoscope manipulating device for manipulating said endoscope from outside said patient; and

a surgical instrument manipulating device for manipulating said surgical instruments from outside said patient.

5. An internal treatment apparatus for a patient comprising a flexible tubular body to be introduced into a patient, said flexible tubular body comprising:

a center opening for inserting therethrough an endoscope for observing a target site, said center opening extending

through said flexible tubular body from a center of a distal end face of said flexible tubular body, said distal end face facing said target site, and

a plurality of circumferential apertures through which surgical instruments are inserted for performing a surgical procedure on said target site, each of said plurality of circumferential apertures being provided to extend through said flexible tubular body in an area including said distal end face and a side face of said flexible tubular body.

6. An internal treatment system for a patient comprising:

a flexible tubular body to be introduced into a patient, said flexible tubular body including a center opening for inserting therethrough an endoscope for observing a target site, said center opening being circular in cross section and extending through said flexible tubular body from a center of a distal end face of said flexible tubular body, said distal end face facing said target site, and a plurality of circumferential apertures through which surgical instruments are inserted for performing a surgical procedure on said target site, each of said plurality of circumferential apertures being provided to extend through said flexible tubular body in an area including said distal end face and a side face of said flexible tubular body;

a body manipulating device for manipulating said

flexible tubular body from outside said patient;

an endoscope manipulating device for manipulating said endoscope from outside said patient; and

a surgical instrument manipulating device for manipulating said surgical instruments from outside said patient.

7. The internal treatment apparatus for a patient according to claim 1, 3 or 5, wherein said endoscope is a stereoscopic endoscope allowing an operator to stereoscopically observe the target site.

8. The internal treatment apparatus for a patient according to claim 1, 3 or 5, wherein

said surgical instrument comprises a monitor device allowing an operator to observe a vicinity of a distal end of said surgical instrument.

9. The internal treatment apparatus for a patient according to claim 8, wherein

said surgical instrument comprises an illumination device which allows an operator to illuminate a vicinity of said distal end of said surgical instrument with light.

10. The internal treatment apparatus for a patient according to claim 9, wherein said surgical instrument comprises at least one of an air feed device and a water feed device which allows an operator to clean a distal end of said monitor device.

11. The internal treatment system for a patient according to claim 2, 4 or 6, further comprising an image displaying device for displaying an image formed by said endoscope.

12. The internal treatment apparatus for a patient according to claim 1, 3 or 5, wherein said flexible tubular body comprises a resiliently deflectable portion.

13. The internal treatment apparatus for a patient according to claim 1, 3 or 5, wherein said surgical instrument comprises a resiliently deflectable portion.

14. The internal treatment apparatus for a patient according to claim 3 or 5, wherein said flexible tubular body comprises grooves provided between each adjacent said circumferential apertures.

15. The internal treatment apparatus for a patient according to claim 3 or 5, wherein a projection angle of said surgical instruments from said flexible tubular body is smaller than a half angle of a field-of-view of said endoscope.

16. The internal treatment apparatus for a patient according to claim 3 or 5, wherein said endoscope comprises an illumination device which emits white light, and said surgical instruments each comprises an illumination device which emits colored light.

17. The internal treatment apparatus for a patient

according to claim 16, wherein each said illumination device of said surgical instruments continuously emits colored light.

18. The internal treatment apparatus for a patient according to claim 16, wherein each said illumination device of said surgical instruments emits colored light intermittedly.

19. The internal treatment apparatus for a patient according to claim 3 or 5, wherein said endoscope comprises an illumination device, and said surgical instruments each comprises an illumination device which emits light having light intensity different from that of light emitted from said illumination device of said endoscope.

20. The internal treatment system for a patient according to claim 2, 4 or 6, wherein

said endoscope is a stereoscopic endoscope allowing an operator to stereoscopically observe the target site.

21. The internal treatment system for a patient according to claim 2, 4 or 6, wherein

said surgical instrument comprises a monitor device which allows an operator to observe a vicinity of a distal end of said surgical instrument.

22. The internal treatment system for a patient according to claim 21, wherein

said surgical instrument comprises an illumination device which allows an operator to illuminate a vicinity of

said distal end of said surgical instrument with light.

23. The internal treatment system for a patient according to claim 22, wherein

said surgical instrument comprises at least one of an air feed device and a water feed device which allows an operator to clean a distal end of said monitor means.

24. The internal treatment system for a patient according to claim 2, 4 or 6, further comprising an image displaying device for displaying an image provided by said endoscope.

25. The internal treatment system for a patient according to claim 2, 4 or 6, wherein

said flexible tubular body comprises a resiliently deflectable portion.

26. The internal treatment system for a patient according to claim 2, 4 or 6, wherein

said surgical instrument comprises a resiliently deflectable portion.

27. The internal treatment system for a patient according to claim 4 or 6, wherein said flexible tubular body comprises grooves provided between each adjacent said circumferential apertures.

28. The internal treatment apparatus for a patient according to claim 4 or 6, wherein a projection angle of said

surgical instruments from said flexible tubular body is smaller than a half angle of a field-of-view of said endoscope.

29. The internal treatment apparatus for a patient according to claim 4 or 6, wherein said endoscope comprises an illumination device which emits white light, and said surgical instruments each comprises an illumination device which emits colored light.

30. The internal treatment apparatus for a patient according to claim 29, wherein each said illumination device of said surgical instruments continuously emits colored light.

31. The internal treatment apparatus for a patient according to claim 29, wherein each said illumination device of said surgical instruments emits colored light intermittedly.

32. The internal treatment apparatus for a patient according to claim 4 or 6, wherein said endoscope comprises an illumination device, and said surgical instruments each comprises an illumination device which emits light having light intensity different from that of light emitted from said illumination device of said endoscope.